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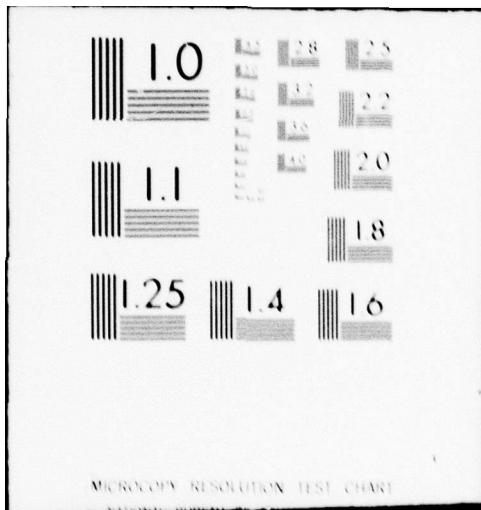
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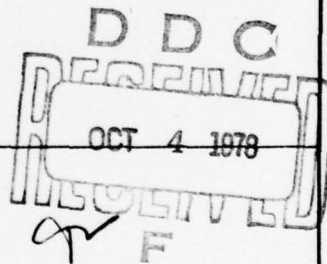
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EVALUATION OF OPERATING ROOM NURSE INTERVENTION  
IN TERMS OF PATIENT SATISFACTION

Abstract of a Thesis

Presented to

the Faculty of the Frances Payne Bolton School of Nursing  
Case Western Reserve University

In partial fulfillment of the requirements for the  
Degree of Master of Science in Nursing

by

Carol Ann Ganser

Approved:

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Violet A. Buckbee

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## CHAPTER ONE

### Problem Statement

The preoperative period for surgical patients can be one of the most stressful times ever encountered. They have been taken from a safe and familiar environment and placed in one that is foreign and maybe somewhat impersonal. This may be their first experience with surgical intervention or they may have had numerous surgical procedures. In either case it is the nurses' responsibility to provide support, strength, and understanding to both patients and their families. Arising from this situation is a question that is frequently being asked by hospital administration, nursing service administration, and the medical staff that is: "What do operating room (OR) nurses contribute to total care of patients"? Patients who will be undergoing surgery will experience needs that are particular to this period in their life and reflect their feelings on many aspects of their daily routine. One way operating room nurses can contribute to satisfying these needs is by sharing with patients their knowledge of the inner workings of the operating room. By visiting patients prior to surgery, answering questions, and instructing them in physical techniques to enhance their recovery, OR nurses can provide assurance that their care will continue without interruption. Evaluating that nursing intervention by the OR nurse can satisfy needs of the surgical patient is a problem that exists in large or small hospitals.

The purpose of this study was to evaluate in terms of patient satisfaction the effect of preoperative intervention by the OR nurse. The following hypothesis was tested: patients who receive a preoperative visit by the OR nurse in addition to the routine care given on the nursing unit will score higher on a postoperative evaluation questionnaire than those patients who receive only routine care from the unit nursing staff.

#### Review of Literature

In 1969 the Association of Operating Room Nurses (AORN) House of Delegates adopted a definition of professional operating room nursing (Alexander, Schrader & Kneedler, 1974) which included:

The objective of the clinical practice of professional operating room nursing is to provide a standard of excellence in the care of the patient before, during and after surgical intervention. (p. 401)

Achieving this standard is contingent upon OR nurses recognizing the physiological, psychological, and sociocultural needs of each patient and planning care accordingly. Implementation depends upon seeing the patient before surgery and following through after surgery to evaluate the effectiveness of nursing care during surgery. In the past decade many changes in nursing practice have taken place. In the opinion of Trail (1975) these changes have occurred because there has been increasing awareness of patients' needs. That change in practice has extended to OR nurses. Nurses no longer can be content with the safety and sterile atmosphere of the surgical suite. They must be aware of and responsible for the quality of nursing care given in the OR.

The Association of Operating Room Nurses has been genuinely concerned with the quality of nursing care that is given in the OR and has continued since 1969 to update standards and practices related to that care in the OR. During the 25th annual AORN Congress in New Orleans in March 1978, the AORN House of Delegates adopted a new and broader concept of operating room nursing. It reads as follows:

The nurse in the operating room responsible for providing nursing care to surgical patients assumes a perioperative role. Perioperative is used as an encompassing term to incorporate the three phases of the surgical patient's experience. This includes the preoperative, intraoperative, and postoperative time periods. Role refers to expected behavior patterns and in this case, the range of clinical activities performed during the preoperative, intraoperative, and postoperative phases. Those behaviors or nursing activities that the nurse performs as a part of the perioperative role are carried out using the nursing process as reflected in the standards of practice. (Note 1)

Nursing care is a continuous process. Observations (Gruendemann, 1977, Mahomet, 1975 & Ridgeway, 1976) demonstrate that OR nurses can satisfy needs of surgical patients by using the four components of the nursing process: assessment, planning, implementation, and evaluation. Preoperative and postoperative visits play a role in achieving these facets of nursing care so relevant to surgical patients during their hospitalization. At the time of these visits patients are identified as individuals (Mehaffy, 1971), a process which results in minimizing patients' fears of the unknown. Communication with patients related to impending surgery has been identified



as being quite important (Edwards, 1971). It was found that preoperative visits made by OR nurses were one way of evaluating overall behavioral responses of patients before surgery. Wallis (1971) observed that preoperative visits by the OR nurse can contribute vital information related to various aspects of patients' personalities, both physiological and psychological. That information helps create an atmosphere for personalized care and firmly identifies the patient as an individual.

Since patients are most vulnerable once they are in the OR and sometimes they cannot communicate their needs and desires, OR nurses must be ready and able to assume an integral part of the nursing care for all surgical patients. In the surgical suite McPhail (1974) sees OR nurses as the individuals who can provide an environment which offers safety and comfort to surgical patients. This report parallels results of studies by Stetzer (1974) which reaffirms safety as being an important environmental factor that contributes to satisfying patients' needs. Empirical data (Saylor, 1975) has further substantiated that the surgical patient experiences anxiety and fear from two different sources. One source comes from the patients themselves, the fear of what might be discovered during the surgery and how they will cope with it. The other source of fear and anxiety to patients arises from family members who attempt to overprotect the patient while uttering erroneous assurances related to the outcome of the surgery.

Patients may have different ideas about what they want to know in contrast to what nurses see as important for them to know. A study done by Dodge (1972) revealed that patients wanted clarification of ambiguities related to their current and expected physical status and

details as well as general information. Nurses agreed but felt that more emphasis should be placed on expectancies of care rather than on the cause and seriousness of their condition. Postoperatively patients stressed the importance of many things as contributing to their recovery. For instance, results of a study by Weiler (1968) revealed that patients wanted information about pain, oxygen and chest tubes, and a description of the intensive care unit. They also sought information about seeing a minister of their choice and the frequency of visiting hours. Moreover they wanted this information to be communicated to their family.

What concerns patients before their surgery? This question was asked of postoperative patients by Mitchell (1973). The data collected showed that patients wonder if they really need the surgery, if the surgeon is competent, if they will die in the operating room, what the surgeon will find when he operates, if they will have a permanent handicap or limitation.

The value of preoperative visits by OR nurses was confirmed (Healy, 1968, Peitchinis, 1965 & Thomas, 1974) when, postoperatively, observations of surgical patients who had received preoperative teaching revealed greater cooperation by patients in their recovery. It was noted that patients performed deep breathing as it had been demonstrated and used correct body posture which enhanced recovery. Winslow and Fuhs (1973) developed a patient assessment tool that established physical and psychological baseline data to rate the anxiety level of surgical patients preoperatively and then communicated findings to Recovery Room (RR) nurses and nurses in the Surgical Intensive Care Unit (SICU). RR and SICU nurses related that they were better able

to anticipate how the patient would respond to recovering from anesthesia and to the presence of pain when they had this information.

Data evaluating fear and anxiety in surgical patients gave support to the value of preoperative visits. Graham and Conley (1971) interviewed 70 randomly selected surgical patients in one hospital. Anxiety levels were measured by taking the subjects' blood pressure and pulse preoperatively to establish a baseline of data on which to compare recordings of the same postoperatively. The researchers also used a face-to-face technique of observation and interviewing to record verbal content and the patients' overall behaviors. These latter two techniques, in combination with the blood pressure recordings, enabled the researchers to develop a tool that indicated various levels of anxiety. Blood pressure recordings did decrease postoperatively. Pulse recordings were not used since there was no significant difference either high or low between recordings done preoperatively or postoperatively. The investigators found that anxiety and fear were experienced more when threat of mutilation or discovery of malignancy was a possibility. Women were found to have higher anxiety levels than men; however, the researchers attributed the difference to the social acceptability of free expression of feelings by women.

Lindeman and Aernam (1971) evaluated the effect of nursing intervention on 261 surgical patients in regard to structured and unstructured preoperative teaching. The control group consisted of 135 subjects who received preoperative teaching from nurses on the nursing units that was unstructured. The nurses did the teaching when and how they wanted to and they included information of their own choosing. In the experimental group 126 subjects participated in the study.



They received the structured teaching. In the experimental group the nurses based their preoperative teaching on previously prepared material that told them what to teach and how to teach it. Data obtained by the researchers supported the value of preoperative teaching. Postoperatively, patients in the structured teaching group were able to deep breathe and cough progressively better than those in the control group. This was tested by measuring the subjects' vital capacity, maximum expiration flow rate, and forced expiratory volume. The  $t$  value obtained for measuring the differences in these measures was significant. A  $t$  test was also applied to data for mean length of hospital stay and the mean number of analgesics administered postoperatively. Level of significance was set at .05. Mean length of hospital stay was reduced significantly but no meaningful effect was found in regard to the need for analgesia.

Group teaching in contrast to individualized teaching has been studied. Lindeman (1972) compared the effect of individualized and group teaching on "postoperative ventilatory function, length of hospitalization, postoperative need for analgesia and length of learning time" (p. 196). The study included 351 subjects who met the established criteria, 178 subjects received individualized preoperative teaching and 173 subjects received preoperative teaching in a group setting. Classification variables of age, smoking habits, and site of incision were introduced and applied to see if they had any influence on what the researchers were measuring. Implications for nursing concluded that although group teaching was equally effective and more efficient than individualized teaching when related to deep breathing, coughing, and bed exercises, the findings cannot be generalized to

other content or situations. Some patients may find it easier to communicate on a one to one basis. Others may tend to ask more questions when teaching is individualized. Older patients, if given the opportunity to learn, could compensate for decreased respiratory function as a result of physiological age.

Schmitt and Wooldridge (1973) did a study that focused on the influence of psychological preparation for surgery. Twenty-five patients met in group session the evening before surgery and discussed their fears and concerns. They were told what to expect and how they could help in their recovery. A randomly selected group of 25 patients received routine care. They measured verbal, interactional, and physiological variables. The data collected supported the research hypothesis "that extraprecaution would increase patient participation, decrease tension and anxiety, and leads to a more rapid postoperative recovery" (p. 108).

Further studies (Lindeman & Stetzer, 1973 & Lindeman, 1974) did not support the statements made in nursing literature at that time concerning the value of preoperative visits for decreasing anxiety. There were no differences in anxiety levels of patients, visited or not visited. However, the study did demonstrate that preoperative visits were effective in promoting continuity of care from the pre-surgical period through the operative period to the postoperative phase of recovery.

Much of the empirical data analyzed by researchers has focused on patient anxiety as it relates to preoperative teaching both in a structured and unstructured setting. Other studies have been done to elicit from surgical patients their fears/or concerns that are

relevant to their surgical experience. Emphasis has been placed on enhancing the recovery period by making the patients more aware of why, for example, it is necessary for them to frequently cough and deep breathe after surgery. It has also been demonstrated that information the patient desires to know differs from what the nurse sees as important for him to know. Satisfying patients' needs without sacrificing any aspect of quality patient care has become a focal point of nursing today. By relating the four components of the nursing process to care of surgical patients' the OR nurse has the unique opportunity to contribute to the continuity of quality care. Continuity is accomplished when OR nurses take part in preparing surgical patients for all phases of their hospitalization as it relates to their surgical experience.

## CHAPTER TWO

This chapter focuses on the research method used in this study. It includes a description of the setting where the study was conducted; a discussion of the subjects who comprised the sample; an explanation of how the subjects were selected for participation in the study; how the data were collected; and a discussion of the data collection tool that was used.

### Method

#### Setting

The study was conducted at a large midwestern hospital with over 1000 beds. Data were collected from October 7, 1977 through December 11, 1977. The subjects who participated in the study were housed on 13 nursing divisions within the hospital complex.

#### Sample

The sample consisted of 67 male and female subjects over 18 years of age who had been admitted to General Surgery Service for any of the following procedures: cholecystectomy, intestinal surgery, breast surgery, herniorrhaphy, appendectomy, hemorrhoidectomy, thyroidectomy, and excision of parotid masses. Subjects admitted for gastric surgery would have been included in the study but no gastric surgery was performed during the time that data were collected. Four weeks after the data collection was started the list was expanded to include the surgical procedures of thyroidectomy and excision of parotid masses. Expansion of the study to include these two procedures was done since



they were routinely performed by the general surgeons. Four potential subjects were lost to the study since thyroidectomies were not included at the inception of data collection.

All subjects had been admitted for elective surgery and were hospitalized from three days to two weeks. They were able to (1) understand verbal instruction and (2) read and communicate in English. Seven subjects did not meet these criteria. Four were disoriented to time and place at the time of the initial interview, two did not read or write and one did not understand English. The remaining 60 subjects made up the experimental and control groups with 30 subjects in each group. Two subjects in the experimental group refused to participate in the study and one subject was withdrawn from the study because the anticipated surgery was cancelled. In the control group one subject refused to participate and one subject withdrew during the postoperative period by declining to answer the questionnaire. The researcher withdrew one subject post surgery due to a deterioration in his condition. The final sample consisted of 54 subjects, 27 in the experimental and 27 in the control groups, who met all the criteria and completed the postoperative evaluation questionnaire.

#### Sample Procedure

Names of subjects meeting the sample criteria were obtained from the OR schedule on the day preceding surgery. The subjects were randomly assigned by a toss of a coin to the experimental and control groups.

The researcher visited each nursing unit where subjects were located in late afternoon or early evening on the day preceding

surgery. The researcher informed the nurse in charge of her presence and explained her reason for being there. Initially the researcher wore street clothes covered by a white lab coat when interviewing the subjects. Two of the first five subjects refused to participate in the study and it was felt by the researcher that the subjects were not identifying the researcher as a graduate nurse. It was speculated that wearing attire customarily worn by practicing nurses might be more appropriate. Thus when the second week of data collection began, the researcher dressed in a white uniform or green OR apparel covered by a lab coat. Rapport was quickly established with the potential subjects and with the hospital staff. Since the setting did not address the patients' attitudes toward nurses, it does not seem likely that the researcher's attire influenced the patients' responses to questions.

Subjects' charts were reviewed to identify what surgical procedure was anticipated. The researcher then visited the potential subjects, explained the nature of the study to them, and requested their participation in the study (see Appendixes A & B). If patients were willing to participate in the study, they were asked to sign the appropriate consent form (see Appendixes C & D). If not, they were thanked for their time. Subjects were informed that (1) no names would be used; (2) all data would be reported in aggregate form; (3) participation or non-participation in the study would not alter their care; and (4) they could withdraw from the study at any time or refuse to answer any questions. Any information disclosed during data collection vital to the subjects' care was charted or reported to the appropriate source. Only the researcher had access to the list containing the names, hospital numbers and code numbers of the



subjects. It was kept in a locked box and destroyed at the completion of data collection.

#### Data Collection Procedure

Data collection was started after the proposal was approved by the School of Nursing Research Review Committee and the Hospital Committee on Clinical Research. Approval for the study was also obtained from the Director of General Surgery Services and the Director of the Clinical Nursing area where data were collected.

Subjects in the experimental group were visited by the researcher the day preceding surgery. Demographic data (see Appendix E) was obtained from the subjects' charts prior to the visit. When histories and physicals had not been done prior to the researcher's initial visit, information related to previous surgical experiences was elicited directly from the subjects. The preoperative visit (see Appendix F) related to general information about the operating room such as cool temperatures and the bright lights; preparation prior to surgery that referred to reasons why food and drink was withheld after midnight and the necessity of removing dentures or partial plates; there was a demonstration and explanation of the necessity to cough and deep breathe postoperatively (including a return demonstration from the subject); discussion of postoperative pain and the use of medication and other measures to relieve the discomfort; and explanations that related to the use of any anticipated equipment specific to the subjects' surgery such as drains, foley catheters or gastric drainage tubes.

Each visit was in addition to the routine preoperative nursing care that was provided by the nursing unit and it lasted approximately

30 to 40 minutes. The only exception to this was one woman who was scheduled for a breast biopsy. The subject was 40 years old, married, had four children, and was a practicing attorney. This was not the first surgical experience for the subject. The researcher spent approximately two hours with the subject which included accompanying her to the x-ray department where a routine chest x-ray and mammograms were taken. During the time spent with the subject the researcher answered questions concerning the surgery, type of anesthesia and listened to the subject express her fears and concerns about the surgery and possible outcome. Her major concern was whether she should sign the permit consenting only to the biopsy or the permit consenting to more radical surgery to be performed if indicated by results of the frozen section examination.

All postoperative visits occurred between one to six days post surgery with the average visit made on the second postoperative day. The decision regarding the timing of visits was based upon the type of surgery performed and the condition of the subject. During these visits subjects received and were asked to complete the postoperative evaluation questionnaires. The coded questionnaires were left with the subjects overnight. The subjects were asked to place the completed questionnaires in the envelopes provided and to seal the envelopes. The researcher picked up the questionnaires in the sealed envelopes the following day. At that time the researcher answered any questions that the subjects had regarding the general nature of the study and/or specifically related to the questionnaires. When subjects were discharged before the researcher visited them, they left the questionnaires at the nurses' station in a sealed envelope with the researcher's

name on the outside. The researcher thanked the subjects for their time and participation in the study. The subjects who left the questionnaires at the nurses' station had been thanked for their participation in the study at the time they received the questionnaire.

Subjects in the control group were visited by the researcher the day preceding surgery to obtain their consent to participate in the study. At that time demographic data and type of surgery was obtained from the charts and if histories and physicals had not been done, information related to previous surgical experiences was elicited directly from the subjects. The control group received only the pre-operative nursing care that was part of the daily routine of the nursing unit to which they were assigned.

The researcher revisited subjects from one to six days post surgery usually on the third postoperative day. As in the experimental group the decision regarding timing of the visit was dependent on the type of surgery performed and the general condition of the patient. At the time of the visit the subjects were given the postoperative evaluation questionnaire which had been put in an envelope and they were asked to complete it. The same procedure in regard to the questionnaires was used with the control group as was used with the experimental group in regard to its being returned to the researcher. Both sets of questionnaires were picked up on the average of the fourth postoperative day. The range for the experimental group was from one to twelve days and the range for the control group was from one to seven days post surgery. Then the researcher thanked the subjects for their time and participation in the study.

The only exception to the above visiting routine for both groups

related to subjects who had breast biopsies because the subjects were discharged the morning of the first postoperative day. They were visited postoperatively the night of surgery and given the questionnaire to complete. In addition, they were instructed to leave the postoperative evaluation questionnaire in a sealed envelope addressed to the researcher at the nurses' station to be picked up by the researcher later in the day.

#### Data Collection Instruments

Data were collected primarily through the use of a questionnaire (see Appendix G).

Part 1 of the postoperative evaluation questionnaire was developed by the researcher to ascertain the patients' view of the type of information given and the helpfulness of this information in helping the subject deal with the surgery. Question 1, 2, and 3 related to general information usually given prior to surgery. Questions 4, 5, 6, and 7 referred to the environment the subject was in immediately prior to surgery. Questions 8 through 20 elicited information related to postoperative experiences.

Each question was scored according to the following system: (1) most helpful = 3; (2) helpful = 2; (3) not very helpful = 1; and (4) not discussed = 0. The points were added to obtain a final score for each subject. Mean scores were obtained for the experimental and control groups. Questions 13, 14, and 15 were scored separately and were not included as part of the total score or in calculating means. These questions related to interaction which would not have been discussed routinely with all subjects, since it was relevant to selected operative procedures such as cholecystectomy, sigmoid resection,



and breast surgery.

Part 2 of the postoperative evaluation questionnaire was included to elicit priorities, concern and/or fears that did not come into focus during the preoperative visit.

The demographic data sheet (Appendix E) elicited information necessary for individualizing preoperative teaching. In addition data were analyzed in terms of demographic variables in order to identify differences in scores according to (1) age; (2) sex; (3) occupation; (4) religious orientation; (5) previous surgery; and (6) description of operative procedure.

The following chapter will focus upon analysis of the data collected. It will include a report and discussion of the test scores obtained from the postoperative evaluation questionnaire completed by subjects who participated in the study. In addition, discussion of comments elicited by subjects on part 2 of the postoperative evaluation questionnaire will be reviewed.

## CHAPTER THREE

### Introduction

The purpose of this study was to evaluate in terms of patient satisfaction the effect of preoperative intervention by the operating room nurse. In this chapter the characteristics of the subjects such as age, sex, religious preference, and occupational rank will be described. In addition information related to subjects who were experiencing surgery for the first time or those subjects who had had previous surgery will be presented. The hypothesis was analyzed through use of a one tailed t test ( $\alpha = .05$ ) for difference of mean scores. T tests were also used to determine the significance of related variables such as age in terms of cohorts and previous surgery. The questions that comprised part two of the postoperative evaluation questionnaire were analyzed with fears and concerns being discussed according to initial and previous surgical experience and sex. The remaining three questions were analyzed in the same manner.

### Characteristics of Subjects

Fifty-four subjects participated in the study, 20 male, and 34 females. There were 27 subjects in the experimental group and 27 subjects in the control group. In the experimental group five subjects were male and 22 subjects were female. Fifteen subjects were male and 12 subjects were female in the control group.

The following is a comparison of these groups in terms of marital status, religious preference, age, and occupations.



### Marital Status

In the control group three subjects were single, 20 subjects were married, three subjects were divorced, and one subject was widowed. In the experimental group the number of subjects in the single and married categories were identical to that of the control group while the divorced and widowed categories each had two subjects.

### Religious Preference

Religious preference was categorized into four types, Catholic, Protestant, Jewish, and no preference. In the experimental group six subjects were Catholic, ten subjects were Protestant, three subjects were Jewish, and eight subjects stated no preference. In the control group six subjects were Catholic, 13 subjects were Protestant, three subjects were Jewish, and five subjects stated no preference.

### Age

The age of the subjects in the experimental group ranged from 21 to 67 years old with the average age being 41.3 years. In the control group ages of the subjects ranged from 24 to 79 years old with the average age being 51.6 years. The median age in the experimental group was 39 years old and the median age in the control group was 52 years old.

### Occupations

Subjects were categorized in terms of occupations. Occupations were classified as professional, white collar, blue collar, and other. Professional included such occupations as teacher, lawyer, engineer, real estate executive, and corporation executive. White collar included such occupations as secretary, salesmen, supervisor, and

clothing store owner. Blue collar included such occupations as auto body mechanic, typist, housekeeper, nurse's aide, custodian, brick layer, and retired rigger. The category, other, included housewife and retired. The class, professional, as used in the study corresponds to the class used by Hollingshead (Note 2) that is termed, higher executives, proprietors of large concerns, and major professionals. White collar class as used in the study corresponds to business managers, proprietors of medium sized businesses and lesser professionals while blue collar class as used in the study takes in occupations in Hollingshead's clerical and sales workers, technicians, owners of little businesses, and skilled manual employees. The category, other, in the study corresponds to unskilled employee.

In the experimental group 26% (7) of the 27 subjects were classified as professional, 7% (2) as white collar workers, and 11% (3) as blue collar. Fifty-six percent (15) of the subjects could not be correctly classified since they stated their occupations as housewife or retired. In the control group 15% (4) of the 27 subjects were classified as professional, 15% (4) of the subjects had white collar jobs, and 22% (6) of the subjects had blue collar jobs. Forty-eight percent (13) of the subjects listed their occupations as housewife or retired and could not be classified.

### Surgeries

In addition to the description of subjects that was provided by the demographic data, data were obtained to determine how many of the subjects had had previous surgery and how many subjects were undergoing their initial surgical experience. In both the experimental and control groups 22% (6) of the 27 subjects were in the hospital for

first surgeries and 78% (21) of the 27 subjects in both groups had had previous surgery. In the experimental group the range of previous surgeries was from one to three with the mode being one surgery. The range in the control group was from one to six previous surgeries with the mode being two prior surgeries.

Table 1 (page 22) is a summary table of the characteristics of the subjects who participated in the study.

#### Postoperative Evaluation Questionnaire

##### Part One - Testing the Hypothesis and Related Variables

The hypothesis, patients who receive a preoperative visit by the OR nurse in addition to the routine care given on the nursing unit will score higher on a postoperative evaluation questionnaire than those patients who receive only routine nursing care from the unit nursing staff, was significant at the .05 level of significance using a one tailed t test for difference of means.

The postoperative evaluation questionnaire was composed of two parts. The first part consisted of 20 questions pertaining to general preoperative information and how helpful that information was to the subjects in dealing with their surgery. Data were analyzed in terms of two sets of scores from each individual postoperative evaluation questionnaire. The scores were derived from 17 of the 20 questions that were scored together since they were an aggregate of general information and questions 13, 14, and 15 that were scored together, as they related to specific information that only certain subjects needed to know, dependent on the type of surgical procedure that was to be done. In both the experimental and control groups individual scores were added together and the average scores in each group were

Table 1  
Summary Of Characteristics Of Subjects

Characteristics	Groups		
	Experimental N = 27	Control N = 27	All Subjects N = 54
Sex			
Male	5 (19%)	15 (56%)	20 (37%)
Female	22 (81%)	12 (44%)	34 (63%)
Marital Status			
Single	3 (11%)	3 (11%)	6 (11%)
Married	20 (74%)	20 (74%)	40 (74%)
Divorced	2 (7½%)	3 (11%)	5 (9%)
Widowed	2 (7½%)	1 (4%)	3 (6%)
Religious Preference			
Catholic	6 (22%)	6 (22%)	12 (22%)
Protestant	10 (37%)	13 (48%)	23 (43%)
Jewish	3 (11%)	3 (11%)	6 (11%)
No Preference	8 (30%)	5 (19%)	13 (24%)
Age			
Range	21-67	24-79	21-79
Age $\bar{X}$	41.3	51.6	46.5
Occupations			
Professional	7 (26%)	4 (15%)	11 (20%)
White Collar	2 (7%)	4 (15%)	6 (11%)
Blue Collar	3 (11%)	6 (22%)	9 (17%)
Other			
Housewife	14 (52%)	9 (33%)	23 (43%)
Retired	1 (4%)	4 (15%)	5 (9%)
Surgeries			
Initial	6 (22%)	6 (22%)	12 (22%)
Previous Surgery	21 (78%)	21 (78%)	42 (78%)
Range	1-3	1-6	1-6
Mode	1	2	1



obtained for the general information questions and questions 13, 14, and 15.

The experimental and control groups differed significantly in reference to the 17 general information questions. The  $t$  value for these data was 6.94 ( $df = 52$  where  $df = N_1 + N_2 - 2$ ) which is significant at  $\alpha = .05$  for a one tailed  $t$  test. There was also a significant difference between groups in terms of mean scores for questions 13, 14, and 15,  $t = 2.67$  ( $df = 38$ ) which is significant at  $\alpha = .05$  for a one tailed  $t$  test. Tables 2 and 3 show the mean scores, standard deviation, and  $t$  value obtained for the general information scores and scores for questions 13, 14, and 15.

Table 2  
Mean Scores, Standard Deviation, And  $t$  Value  
For General Information Questions

Group		$\bar{X}$	s	t
Experimental	N = 27	41.22	5.65	6.94*
Control	N = 27	23.78	11.51	

\*significant at the .05 level

Table 3  
Mean Scores, Standard Deviation, And  $t$  Value  
For Questions 13, 14, And 15

Group		$\bar{X}$	s	t
Experimental	N = 24	4.71	2.44	2.67*
Control	N = 16	2.69	2.02	

\*significant at the .05 level

In view of the significant differences stated above, one tailed  $t$  test were used to analyze whether there were differences in general

information scores according to (1) age; (2) sex; (3) occupation; (4) previous surgery; and (5) description of operative procedures. In addition a one tailed t test was used to analyze the difference of mean scores of questions 13, 14, and 15 in reference to description of operative procedure.

Age. Test scores were analyzed in terms of age. The experimental and control groups were compared in terms of two age cohorts, 20-49 years and 50-79 years. Thirty-one subjects comprised the age cohort, 20-49 years; the age cohort, 50-79 years, was comprised of 23 subjects. A one tailed t test ( $\alpha = .05$ ) was done on the difference of mean scores in the 20-49 age cohort and in the 50-79 age cohort. The experimental and control groups differed significantly in the 20-49 age cohort. The t value for these data was 1.86 (df = 29) which is significant at  $\alpha = .05$  for a one tailed t test. The difference between the groups in the age cohort, 50-79, was highly significant. The t value was 5.00 (df = 21) which is significant at  $\alpha = .05$  for a one tailed t test. Table 4 shows the mean scores, standard deviation, and t value obtained for the age cohort 20-49 years. Table 5 (page 25) shows the mean scores, standard deviation, and t value for the age cohort, 50-79 years.

Table 4  
Mean Scores, Standard Deviation, And t Value  
For Age Cohort 20-49

Group		$\bar{X}$	s	t
Experimental	N = 18	41.89	5.47	1.86*
Control	N = 13	37.23	7.99	

\*significant at the .05 level

Table 5  
Mean Scores, Standard Deviation, And t Value  
For Age Cohort 50-79

Group		$\bar{X}$	s	t
Experimental	N = 9	39.89	5.78	5.00*
Control	N = 14	20.07	10.35	

\*significant at the .05 level

Sex. In both the experimental and control groups the study was dominated by female subjects. There were 22 female subjects in the experimental group and 12 female subjects in the control group. A t test was done on the difference of mean scores of female subjects in reference to the general information questions. The t value obtained was 5.41 (df = 32) which is significant at  $\alpha = .05$  for a one tailed t test. Table 6 shows the mean scores, standard deviation, and t value obtained for the female subjects who participated in the study.

Table 6  
Mean Scores, Standard Deviation, And t Value  
For Female Subjects

Group		$\bar{X}$	s	t
Experimental	N = 22	41.86	5.51	5.41*
Control	N = 12	24.92	12.13	

\*significant at the .05 level

Occupation. The predominant occupation listed in the experimental and control groups was that of housewife. There were 14 subjects in the experimental group and nine subjects in the control group. A t test was done on the difference of mean scores of the general information questions for this group of subjects. The t value obtained

was 4.58 (df = 21) which is highly significant at  $\alpha = .05$  for a one tailed t test. Table 7 shows the mean scores, standard deviation, and t value obtained for these subjects who listed their occupation as housewife.

Table 7  
Mean Scores, Standard Deviation, And t Value  
For Females Listing Their Occupation As Housewife

Group		$\bar{X}$	s	t
Experimental	N = 14	43.14	5.45	4.58*
Control	N = 9	23.67	13.58	

\*significant at the .05 level

Prior Surgery. Of the total 54 subjects in the study only 12 subjects had been admitted to the hospital for surgery for the first time. The remaining 42 subjects had had prior hospitalizations for surgical procedures. Because of the small number of subjects (12) in the hospital for initial surgery a t test was not done on their scores. A one tailed t test was done on the difference of mean scores for the general information questions between the remaining 42 subjects, 21 in the experimental group and 21 subjects in the control group. The difference between the groups was highly significant with a t value of 7.75 (df = 40) at a  $\alpha = .05$  level of significance for a one tailed t test. Table 8 (page 27) shows the mean scores, standard deviation, and t value obtained for those subjects who had had prior surgery.

Seven subjects in the experimental group and six subjects in the control group experienced cholecystectomies during this study. The difference between the experimental and control groups was highly



Table 8  
General Information Mean Scores, Standard Deviation, And t Value  
Of Subjects Having Had Previous Surgery

Group		$\bar{X}$	s	t
Experimental	N = 21	41.67	5.29	7.75*
Control	N = 21	22.05	10.00	

\*significant at the .05 level

significant in reference to the general information questions. The t value for these data was 2.91 (df = 11) which is significant at  $\alpha = .05$  for a one tailed t test. A t test was also run on the difference of mean scores for questions 13, 14, and 15 since subjects having cholecystectomies should have received this information. The t value obtained was 1.96 (df = 13) which is significant at  $\alpha = .05$  for a one tailed t test. Table 9 shows the mean scores, standard deviation, and t value for the general information questions for those subjects who had cholecystectomies. Table 10 (page 28) shows the mean scores, standard deviation, and t value for questions 13, 14, and 15 for those subjects who had cholecystectomies.

Table 9  
General Information Mean Scores, Standard Deviation, And t Value  
Of Subjects Having Cholecystectomies

Group		$\bar{X}$	s	t
Experimental	N = 7	42.57	3.96	2.91*
Control	N = 6	26.83	12.43	

\*significant at the .05 level

In summary, all of the t values were significant at  $\alpha = .05$  using a one tailed t test. The values for scores pertaining to

Table 10  
Mean Scores, Standard Deviation, And t Value For  
Questions 13, 14, 15 Of Subjects Having Cholecystectomies

Group		$\bar{X}$	s	t
Experimental	N = 7	5.00	2.56	1.96*
Control	N = 6	2.50	1.38	

\*significant at the .05 level

general information, questions 13, 14, and 15, age cohort, 50-79, sex (female), occupation (housewife), previous surgery, and general information scores of subjects having cholecystectomies were also significant at  $\alpha = .01$  using a one tailed t test. General information scores, age cohort, 50-79, sex (female), occupation (housewife), and previous surgery were all significant at  $\alpha = .005$  using a one tailed t test. Table 11 (page 29) shows all the t values obtained for the categories tested and their significance at various levels. These values were obtained by using a t test for the difference of mean scores of the various variables used.

#### Part Two - Discussion Of Questions

Part two of the postoperative evaluation questionnaire consisted of four questions. They were: (1) What concerned you most about your surgery? (2) Were you given enough time to ask questions? (3) Were you given adequate time to express your feelings about the surgery? and (4) Did you have any questions that were not answered? If the subjects answered no to question two or three, they were asked to explain their answers. If the answer to question four was yes, they were asked to explain their answer. The responses to the questions were analyzed in reference to sex and if the subjects were experiencing

Table 11  
Mean Scores, Standard Deviation, t Values For Variables Tested And  
The Significance Of The Results At  $\alpha = .05$ ,  $\alpha = .01$ , And  $\alpha = .005$

Variable	N	$\bar{X}$	s	t	.05	.01	.005
General Information							
Experimental	27	41.22	5.65	6.94	s	s	s
Control	27	23.78	11.51				
Questions 13, 14, 15							
Experimental	24	4.71	2.44	2.67	s	s	ns
Control	16	2.69	2.02				
Age Cohort 20-49							
Experimental	18	41.89	5.47	1.86	s	ns	ns
Control	13	37.23	7.99				
Age Cohort 50-79							
Experimental	9	39.89	5.78	5.00	s	s	s
Control	14	20.07	10.35				
Sex, Female							
Experimental	22	41.86	5.51	5.41	s	s	s
Control	12	24.92	12.13				
Occupation, Housewife							
Experimental	14	43.14	5.45	4.58	s	s	s
Control	9	23.67	13.58				
Previous Surgery							
Experimental	21	41.67	5.29	7.75	s	s	s
Control	21	22.05	10.00				
Cholecystectomy							
General Information							
Experimental	7	42.57	3.96	2.91	s	s	ns
Control	6	26.83	12.43				
Questions 13, 14, 15							
Experimental	7	5.00	2.56	1.96	s	ns	ns
Control	6	2.50	1.38				

initial surgery or if they had had previous surgery.

#### Discussion Of Question #1

In response to the first question, what concerned you most about the surgery (?), four categories were compared. They were: (1) fear of the outcome of the surgery which included the possibility of malignancy; (2) fear of anesthesia; (3) fear of pain; and (4) no fears expressed.

Fear Of Surgical Outcome. In the experimental group, 15 subjects expressed a fear of the outcome of surgery, one male and 14 female subjects. The single male subject was experiencing surgery for the first time (sigmoid resection) and the two female subjects undergoing surgery for the first time had breast biopsies. The remaining 12 female subjects all had had prior surgery. The procedures experienced by these 12 subjects on this hospitalization were: three had right colectomies; one subject had a breast biopsy that resulted in a radical mastectomy being done; two subjects had breast biopsies only, one subject had a thyroidectomy; two subjects had cholecystectomies; one subject had a mass removed from the abdominal wall; and two subjects had parotid tumors removed.

Six subjects in the control group expressed a fear of the outcome of surgery, one male and five female subjects. The male subject had a sigmoid resection and it was his first surgical experience. The five female subjects had had previous surgeries. They were hospitalized at this time for the following procedures: one subject had a quadrant resection of breast tissue; two subjects had cholecystectomies; one subject had a thyroidectomy; and one subject had a colostomy closed.

It is interesting to note that the male subject in each group



had a sigmoid resection and it was a first surgery for both while the majority of female subjects in both the experimental and control groups were experiencing dissimilar procedures.

Fear Of Anesthesia. In the experimental group four subjects, all female, expressed a fear of anesthesia. One female subject had a breast biopsy and it was her first surgical experience. The remaining three female subjects had had prior surgery and on this hospitalization underwent a cholecystectomy, a thyroidectomy, and a breast biopsy, respectively. Of the three subjects in the control group expressing a fear of anesthesia all had had previous surgery. The one male subject had an inguinal hernia repaired on this admission while, of the two female subjects, one had an incisional hernia repaired and the other female subject had a thyroidectomy. Of both groups the female subjects expressed the greater concern over anesthesia and the surgeries experienced by them were dissimilar with the exception of a thyroidectomy which appeared in both the control and experimental groups.

Fear Of Pain. Fear of pain was also expressed by subjects in both groups. In the experimental group five subjects, three male and two female, listed this, fear, as a concern. Two of the subjects, one male and one female, were experiencing surgery for the first time. The male subject had a hernia repair and the female subject had a cholecystectomy. In the group of subjects who had had prior surgery two were male and one was female. The female subject had a sigmoid colectomy, one male subject had hemorrhoids ligated and the other male subject had a cholecystectomy.

Only two subjects, both male, in the control group expressed a fear of pain. They had had prior surgery and on this admission both

had hernias repaired.

In comparing the two groups in regard to fear of pain it was the male subjects (5) who cited this fear more often than the female subjects (2).

No Fears Expressed. The last topic cited explicitly by the subjects in both groups was that they had no concerns. Only one subject, a female, in the experimental group listed this. She had had prior surgery and on this admission had a breast biopsy that resulted in a radical mastectomy. In the control group six subjects, five male and one female, wrote that they had no concerns/or fears. One male subject was having surgery for the first time, a thyroidectomy. The one female subject had had previous surgery and underwent a breast biopsy on this admission. The remaining four male subjects had had prior surgery and underwent the following procedures on this admission: one subject had a mass removed from the abdominal wall; and two subjects had hernias repaired.

The only similarity between the groups was that the two females both had breast biopsies with one resulting in a radical procedure being done. Table 12 (page 33) summarizes the four major fears expressed by the subjects in regard to sex and surgical experience.

#### Discussion Of Question #2

When responding to the second question, were you given enough time to ask questions(?), the subjects were asked to explain their reasons if they answered no.

The number of subjects in both groups answering yes to this question was almost identical. Twenty-five subjects in the experimental group answered yes while 24 subjects answered in the affirmative

Table 12  
Four Major Fears Expressed By Subjects  
In Reference To Sex And Surgical Experience

Major Fears	Group	
	Experimental	Control
1. Fear of Surgical Outcome Including Possibility of Malignancy	N = 15	N = 6
Initial Surgery		
Male	1	1
Female	$\frac{2}{3}$	$\frac{0}{1}$
Previous Surgery		
Male	0	0
Female	$\frac{12}{12}$	$\frac{5}{5}$
2. Fear of Anesthesia	N = 4	N = 3
Initial Surgery		
Male	0	0
Female	$\frac{1}{1}$	$\frac{0}{0}$
Previous Surgery		
Male	0	1
Female	$\frac{3}{3}$	$\frac{2}{3}$
3. Fear of Pain	N = 5	N = 2
Initial Surgery		
Male	1	0
Female	$\frac{1}{2}$	$\frac{0}{0}$
Previous Surgery		
Male	2	2
Female	$\frac{1}{3}$	$\frac{0}{2}$
4. No Fears Expressed	N = 1	N = 6
Initial Surgery		
Male	0	1
Female	$\frac{0}{0}$	$\frac{0}{1}$
Previous Surgery		
Male	0	4
Female	$\frac{1}{1}$	$\frac{1}{5}$

in the control group. In the experimental group, five subjects, two male and three female subjects, were experiencing initial surgery and of the 20 subjects who had had prior surgery, three subjects were male and 17 subjects were female. In the control group five subjects, three male and two female subjects, were hospitalized for initial surgery and 19 subjects had had previous surgery, 11 male and eight female subjects.

Responding no to question #2 in the experimental group was a female subject having surgery for the first time. In the control group three subjects, one male and two female subjects, responded no. The male subject was having surgery for the first time while the two female subjects had had prior surgery. The only similarity between the two groups was that the female subject in the experimental group and one of the female subjects in the control group who was experiencing surgery for the first time, did not feel they had enough time to ask the surgeon any questions. Table 13 (page 35) summarizes the information in regard to sex and surgical experience.

#### Discussion Of Question #3

When responding to the third question in part two of the post-operative evaluation questionnaire, were you given adequate time to express your feelings about the surgery(?), the subjects were again asked to explain negative answers.

Again the number of subjects answering yes to this question was almost identical in both groups. Twenty-three subjects in the experimental group answered yes and 24 subjects answered yes in the control group. In the experimental group five subjects, one male and four female subjects, were hospitalized for initial surgery. Of the 18



Table 13  
Summary Table: Question 2  
Sex And Surgical Experience (N = 53)

Response To Question 2	Group	
	Experimental N = 26	Control N = 27
Affirmative Response		
Initial Surgery		
Male	2	3
Female	<u>3</u> 5	<u>2</u> 5
Previous Surgery		
Male	3	11
Female	<u>17</u> 20	<u>8</u> 19
Negative Response		
Initial Surgery		
Male	0	1
Female	<u>0</u> 0	<u>0</u> 1
Previous Surgery		
Male	0	0
Female	<u>1</u> 1	<u>2</u> 2

Note: One female subject in the experimental group declined to answer this question (no reason given).

subjects who had had prior surgery two subjects were male and 16 subjects were female. In the control group six subjects, four male and two female subjects, were experiencing initial surgery and of the 18 subjects who had had previous surgery ten subjects were male and eight subjects were female.

In the experimental group three subjects, two male and one female, responded no to the third question. One of the male subjects was having surgery for the first time and one female subject and one male subject had had previous surgery. In the control group all three

subjects, one male and two female, had had previous surgery. In both groups the reasons given for negative answers were the same. The subjects felt that no one asked them how they felt, especially the surgeons and one male subject in the control group asked this question, "Who was I to express my feelings to?". Table 14 summarizes the information in regard to sex and surgical experience.

Table 14  
Summary Table: Question 3  
Sex And Surgical Experience (N = 53)

Response To Question 3	Group	
	Experimental N = 26	Control N = 27
Affirmative Response		
Initial Surgery		
Male	1	4
Female	$\frac{4}{5}$	$\frac{2}{6}$
Previous Surgery		
Male	2	10
Female	$\frac{16}{18}$	$\frac{8}{18}$
Negative Response		
Initial Surgery		
Male	1	0
Female	$\frac{0}{1}$	$\frac{0}{0}$
Previous Surgery		
Male	1	1
Female	$\frac{1}{2}$	$\frac{2}{3}$

Note: One female subject in the experimental group declined to answer this question (no reason given).

#### Discussion Of Question #4

The fourth question in part two of the postoperative evaluation

questionnaire was, did you have any question that went unanswered(?). The number of subjects answering no was similar in both the experimental and control groups. Twenty-one subjects in the experimental group answered no. Six of the 21 subjects, two male and four female, were experiencing initial surgery and 15 subjects had had prior surgery, three male and 12 female subjects. In the control group 22 subjects answered no. Five of the 22 subjects, three male and two female subjects, were hospitalized for initial surgeries and 17 subjects, nine male and eight female subjects, had prior surgical experience.

In the experimental group all five female subjects responding yes had had previous surgery. Those subjects answering yes in the control group were one male subject in the hospital for initial surgery and two male subjects and two female subjects who had prior surgery.

The only similarity between the two groups in reference to explanations given for an affirmative answer pertained to anesthesia. All three subjects wanted to know more about the type of anesthesia and the agents used and how decisions were made regarding when to use a particular type of anesthetic agent. Table 15 (page 38) summarizes the information in regard to sex and surgical experience of the subjects participating in the study.

The last chapter will focus on the relevance of the data presented in this chapter and how it relates to the purpose of the study. Comments made by the subjects preoperatively and postoperatively will be discussed in relation to the findings of the study. Implications that indicate an expansion of the role of the operating room nurse will be explored and recommendations for further study will be discussed as they relate to the outcomes of the study. A summary

Table 15  
Summary Table: Question 4  
Sex And Surgical Experience (N = 53)

Response To Question 4	Group	
	Experimental N = 26	Control N = 27
Affirmative Response		
Initial Surgery		
Male	0	1
Female	$\frac{0}{0}$	$\frac{0}{1}$
Previous Surgery		
Male	0	2
Female	$\frac{5}{5}$	$\frac{2}{4}$
Negative Response		
Initial Surgery		
Male	2	3
Female	$\frac{4}{6}$	$\frac{2}{5}$
Previous Surgery		
Male	3	9
Female	$\frac{12}{15}$	$\frac{8}{17}$

Note: One female subject in the experimental group declined to answer this question (no reason given).

of the study will be included along with the limitations of the study and changes that would be recommended if the study was replicated.



## CHAPTER FOUR

### Summary, Discussion of Findings, Recommendations for Further Study and Conclusion

#### Introduction

This chapter will present a summary of the study and discussion of findings. Recommendations for further study will be considered such as replication of the study, possible additions/or changes in the present design, and current trends in treatment of surgical patients that resulted in questions during the course of the study that merit consideration.

#### Summary

The purpose of the study was to evaluate in terms of patient satisfaction the effect of intervention by the operating room nurse. The study was conducted over a two month period at a large midwestern hospital.

The sample consisted of 54 male and female subjects over 18 years of age admitted for elective general surgery. For participation in the study the subjects also had to meet the following criteria: (1) understand verbal instruction; and (2) read and communicate in English.

The day preceding surgery subjects were randomly assigned by a toss of a coin to the experimental and control groups. At this time subjects in the experimental group received preoperative teaching by the researcher while subjects in the control group were asked only to participate in the study and received routine hospital care. Subjects

in both groups were visited within two to three days post surgery and asked at this time to complete the postoperative evaluation questionnaire. The researcher retrieved the completed questionnaires personally or, if the subjects were discharged before the researcher returned, the questionnaires were left by the subjects at the nurse's station on the nursing unit.

The hypothesis, patients who receive a preoperative visit by the OR nurse in addition to the routine care given on the nursing unit will score higher on a postoperative evaluation questionnaire than those patients who receive only routine care from the unit nursing staff, was supported by results of statistical tests. A one tailed t test was applied to the difference of mean scores for the following variables: (1) general information questions; (2) questions 13, 14, and 15; (3) age cohort 20-49 years; (4) age cohort 50-79 years; (5) sex (female); (6) occupation (housewife); (7) previous surgery; and (8) description of operative procedure (cholecystectomy). The level of significance was set at .05. Results at this level were significant for all of the variables tested. The t values for scores pertaining to general information, questions 13, 14, and 15, age cohort 50-79 years, sex (female), occupation (housewife), previous surgery, and general information scores of subjects having cholecystectomies were also significant at  $\alpha = .01$  using a one tailed t test. General information scores, age cohort 50-79 years, sex (female), occupation (housewife), and previous surgery were all significant at  $\alpha = .005$  using a one tailed t test.

#### Discussion of Findings

The significant results of the statistical tests indicate that

intervention by the OR nurse can and does satisfy needs that surgical patients have prior to surgery at this particular period in their life. This intervention was in addition to the routine nursing care given by the nursing staff on the nursing unit to which the patients were assigned.

It is interesting to note that the  $t$  value ( $t = 6.94$ ,  $N = 54$ ) related to the general information scores was significant at the following levels of significance  $\alpha = .05$ ,  $\alpha = .01$ , and  $\alpha = .005$  for a one tailed  $t$  test while the  $t$  value ( $t = 2.67$ ,  $N = 40$ ) for questions 13, 14, and 15 was significant only at  $\alpha = .05$  and  $\alpha = .01$  for a one tailed  $t$  test. This difference could be related to sample size or that subjects in both groups received the necessary information contained in questions 13, 14, and 15 on the postoperative evaluation questionnaire.

In comparing the two age cohorts the  $t$  value ( $t = 1.86$ ,  $N = 31$ ) for the age cohort, 20-49 years was significant only at the .05 level of significance for a one tailed  $t$  test. However, the  $t$  value ( $t = 5.00$ ,  $N = 23$ ) for the age cohort, 50-79 years was significant at the following levels of significance  $\alpha = .05$ ,  $\alpha = .01$ , and  $\alpha = .005$  for a one tailed  $t$  test. This might reflect the influence of more surgical experience on the part of the subjects in the age cohort, 50-79 years, than of those subjects in the age cohort, 20-49 years.

The  $t$  value ( $t = 5.41$ ,  $N = 34$ ) for the variable sex (female) was significant at  $\alpha = .05$ ,  $\alpha = .01$ , and  $\alpha = .005$  for a one tailed  $t$  test. It would have been more meaningful to have been able to compare this  $t$  value with a  $t$  value related to the variable sex (male). Since there were only five male subjects in the experimental

group it was inappropriate to apply a t test on the difference of mean scores between the male subjects in the experimental and control groups.

In the experimental and control groups the largest occupation was listed as housewife. The t value ( $t = 4.58$ ,  $N = 34$ ) for this variable was significant at  $\alpha = .05$ ,  $\alpha = .01$ , and  $\alpha = .005$  for a one tailed t test. Significance of this t value might indicate prior knowledge related to hospitalization for childbirth or related gynecological surgical procedures. Only comparison with other occupations or comparisons between social classes can truly enhance the significance of this t value.

The t value ( $t = 7.75$ ,  $N = 42$ ) for the variable previous surgery was highly significant at the following levels  $\alpha = .05$ ,  $\alpha = .01$ , and  $\alpha = .005$  for a one tailed t test. This might indicate recall of prior information received during earlier hospitalizations that was reenforced by the visit of the researcher to those subjects in the experimental group.

In comparing the variable description of operative procedure (cholecystectomy) in regard to general information questions and questions 13, 14, and 15, the t value ( $t = 2.91$ ,  $N = 13$ ) for general information questions was significant at  $\alpha = .05$  and  $\alpha = .01$  for a one tailed t test. The t value ( $t = 1.96$ ,  $N = 13$ ) for the variable questions 13, 14, and 15 was significant only at  $\alpha = .05$  for a one tailed t test. This might be indicative of the small sample size ( $N = 13$ ) or more knowledge by the subjects of the information contained in the questions.



### Discussion and Implications

The necessity of continuity of nursing care for patients during all phases of hospitalization has been discussed in current literature (Gruendemann, 1977, Mahomet, 1975 & Ridgeway, 1976). A suggested way of providing for this continuity of care is through the use of the nursing process, assessment, planning, implementation, and evaluation. There are a number of ways that the OR nurse can begin assessment of the surgical patient. It can be accomplished in a special holding area in the surgical suite, by preoperative visits, or by utilizing the nursing care plan that was initiated on the nursing unit. The assessment would include: (1) psychological needs such as fear of going to sleep or fear of the unknown; (2) physical needs such as height, weight, mobility, or sensory deprivation; and (3) social needs that encompass both the patient and his family. After assessing needs the nurse then plans for the nursing care that will be needed in the OR for that patient. Upon arrival of the patient in the surgical suite implementation of the plan is begun and continued until the surgery is completed. Evaluation takes place immediately following surgery or during the postoperative phase of the hospitalization through visitation or conferring with unit nursing staff in regard to the condition of the patient.

This continuity of care was demonstrated by the following patients in the study. After the preoperative visit the researcher shared pertinent information related to these patients with appropriate OR personnel. A 65 year old male subject in the experimental group was a quadraplegic. Compounding his state of paralysis were fractures of both left extremities and a newly healed decubitus in the area of

the coccyx which caused the patient much concern. Prior to his arrival in the surgical suite knowledge of these facts enabled OR personnel to prepare for the patient ensuring his safety and minimizing any distress that he might experience. Postoperatively the patient had an uneventful recovery.

A 44 year old female subject in the experimental group expressed concern about having a mask placed over her face while her arms were secured on armboards and a strap was in place over her knees. She suffered from claustrophobia and she was afraid of how she would react when going to sleep and waking up. This information was shared with the anesthesiologist and the OR nurse assigned to be in the operating room where the subject would be. Postoperatively the patient said, "I was so glad that I knew before I went to sleep that I would be tied down and that I was prepared for this upon awaking in the operating room. Thank you for telling the people in the OR of my fear."

The value of preoperative visiting has been discussed and supported in literature (Healy, 1968, Peitchinis, 1965 & Thomas, 1974). It was found that patients who had instruction either by unit nursing staff/or OR nursing personnel responded much better postoperatively than patients who did not have any preparation. Responses by patients and members of their families expressed praise and appreciation for the care received during their hospitalization. Results of one study disclosed that patients who had been readmitted at later dates requested that they be placed on the same unit where they had been on a prior admission (Healy, 1968). Operating room nurses were encouraged to share their expertise related to this phase of surgical nursing

with the patients and their families in order to help the patient identify/or define needs and satisfy them.

Findings of this study support the value of the intervention of the operating room nurse in terms of patient satisfaction. Comments of a male subject in the control group who had prior surgical experience further supported the worth of preoperative visits. During the postoperative visit the subject said, "I would have liked to have talked with you before my surgery because I had questions that related to the operating room and the postoperative recovery period." Subjects in the experimental group preoperatively commented that they wanted to know everything that would happen and postoperatively they reenforced that feeling by verbalizing how much the preoperative visit helped them during their conscious moments in surgery and when they returned to the nursing unit. The subjects felt that they were able to deal with each procedure as it happened because they had been told to expect certain things that were carried out as normal and occurring to all patients. Operating room nurses have information about the environment and procedures specific to the OR which other unit staff nurses don't have and it would be difficult for these nurses to keep informed in order to relate this information to surgical patients preoperatively.

Mitchell (1973) asked patients what concerned them most about the surgery and they had a number of replies. A few patients were afraid of dying on the OR table, some patients were afraid of what the surgery might reveal alluding to the possibility of malignancy, and some patients feared permanent disabilities as a result of the surgery. All the patients questioned revealed that they found reassurance in

the visits of the surgical nurses and the anesthesiologists and that they felt more secure when they saw a familiar face the next morning in the surgical suite.

Results of this study support the study done by Mitchell (1973). Fifteen subjects in the experimental group and six subjects in the control group were concerned with what the outcome of the surgery would be with the majority fearing a final diagnosis of malignancy. Two subjects, one female in the experimental group and one female in the control group, were afraid of dying in the operating room. Seven subjects, four females in the experimental group and one female and three males in the control group, expressed much the same concern when they specifically expressed the fear of not waking up from the anesthetic. And three subjects in the experimental group and two subjects in the control group asked the researcher if she would be with them in the OR the following morning.

A study done by Dodge (1972) revealed that patients wanted clarification of ambiguities related to their current and expected physical status. Comments made by subjects in the experimental group reaffirmed this. Subjects especially wanted to know what they would be allowed to do post surgery, if they would be nauseated after the surgery, if they would be told the results of the surgery honestly such as confirming the presence or absence of malignancy, and if hospitalization post surgery would be long.

#### Recommendations for Further Study

It would be advantageous to have the study replicated and the following recommendations for changes and additions are offered for consideration. It is felt that the inclusion of the recommended



changes would enhance and lend credence to the study.

If the study is replicated, it is recommended that a larger sample of the general surgery populace be used. In this way a larger group of patients experiencing initial surgery might be obtained. In this study there were only 12 subjects out of the total 54 subjects who were having surgery for the first time. The inclusion of more subjects experiencing initial surgery would enable the researcher to observe if there were any appreciable indications that intervention by the OR nurse satisfied their needs any better than those patients who had had prior surgery.

The larger sample size might also bring more male subjects into the study. Then the test scores of the male subjects could also be compared to see if the results were as significant as those obtained for the female subjects in the study.

There was information lacking in the study that hindered the researcher from placing the subjects into social classes. That could be corrected by inclusion of the subjects' educational level and yearly income on the demographic data sheet in order to define the subjects' social classes. Subjects could then be compared on social class to determine differences in perception of information.

Replicating the study on a different sample of the surgical population such as ear, nose, and throat patients or ophthalmology patients may elicit needs that are specific to patients in these specialty groups in addition to basic needs experienced by all patients anticipating surgery.

Many ear, nose, and throat, ophthalmology, and geriatric patients receive local anesthesia rather than general anesthetic agents and

this could be a criterion that could be incorporated into an extension of the study. Certain factors come to mind when considering needs of patients who will be receiving local anesthetics. First, the patient will be aware of the immediate environment while he is in the OR and second, if preoperative medication has been given, the patient may be drowsy with the results that elements in the environment may become distorted and out of proportion to reality. Information related to these factors could be part of the preoperative teaching given to the patient. This would be in addition to the basic information imparted to all surgical patients prior to their going to surgery.

The postoperative evaluation questionnaire would not have to be revised if the study were simply replicated. However, it would have to be revised if a different surgical sample were selected. Certain questions would have to be deleted since they are specific to general surgical procedures. In their place questions could be inserted that relate to the surgical specialty selected as a criterion for subject selection. The same changes would be indicated if local anesthesia were a criterion for inclusion in the study instead of general anesthesia. The scoring of the questionnaire could remain the same which was: (1) most helpful = 3; (2) helpful = 2; (3) not very helpful = 1; and (4) not discussed = 0.

#### Questions Arising from the Study

Many questions come to mind as a result of this study. With the ever increasing number of ambulatory surgical centers opening that admit the patient in the morning, perform the procedure, and discharge the patient in the afternoon, one might ask, where does

preoperative teaching fit into these programs and is preoperative teaching necessary for these patients?

From the perspective of satisfying patient needs the answer to these questions would be yes. These patients require nursing care just as patients who are admitted to the hospital for longer periods of time. Patients who use the facilities of ambulatory surgical centers may magnify their needs because they know they are going to have nursing care available only until they are released from the center. After that they will be going home and they may be concerned with what might happen whether it be a normal or abnormal post surgical occurrence. These patients could be made aware of the possibility of postoperative complications and how to cope with them through preoperative teaching. Perhaps in these settings the information could also be given to some member of the family or a friend in addition to the patient. The patient should be accompanied to the center by someone, be it family member or friend.

Two other questions should be considered when discussing ambulatory surgical centers. Would group teaching regarding preoperative teaching be more appropriate in this situation than teaching on an individual basis, and would it be appropriate to plan to do the necessary preoperative teaching several days prior to surgery? Having the patients meet as a group to discuss the anticipated surgery and what they could expect would be less time consuming for the nurse, offer the patients peer support and perhaps answer questions they might not have thought of. On the other hand, some people are better able to express their needs on a one to one basis rather than as part of a group and some questions of others might provoke fears.

However, consideration should be given for individual feelings and reactions in any program. It seems feasible for preoperative instruction to be given a few days in advance of any scheduled surgery. For patients who are to receive general anesthesia the teaching could be planned for the same day that patients get their routine blood work and chest x-ray done. For patients who are to have local anesthesia a time convenient to both the patient and nurse could be arranged.

### Conclusion

The purpose of this study was to evaluate in terms of patient satisfaction the effect of preoperative intervention by the OR nurse. T tests were applied to the difference of mean scores derived from the postoperative evaluation questionnaire. Results of the t test supported the hypothesis that patients who receive a preoperative visit by the OR nurse in addition to the routine care given on the nursing unit will score higher on a postoperative evaluation questionnaire than those patients who receive only routine care from the unit nursing staff.

Recommendations for further study including replication of the study in its original form have been suggested along with suggestions for additions and changes if the study was expanded. Questions that the OR nurse must consider today have been presented. The answers to these questions will delineate the role of operating room nursing just as the continued presence of surgical in-patients demand more of the OR nurse than just being physically present in the OR. The public is reaching out and asking for support both on a psychosocial and physical level and the OR nurse as a member of the health team has a role in providing that needed support.



## APPENDIX A

Visits to Experimental GroupPre-op

Good afternoon (subject's name). My name is Carol Ganser. I'm a registered nurse and I work in the operating room. I'm interested in studying how OR nurses can be more helpful in preparing patients for surgery. I'm here to ask you to participate in my study. It will involve my spending about 30 minutes with you today to discuss your surgery, the physical environment of the OR, what you can expect to happen in the Recovery Room, and your care when you come back to the nursing unit. I will visit you again after your surgery and at that time ask you to complete a questionnaire about the things we discussed today and how much they helped or didn't help you. It should take you about 20 minutes to do it. Your answers will not be identified in any way and your name will not be used in the study. All data collected will be reported in aggregate form. Your willingness to participate or not to participate in the study will not alter any nursing care that you receive and you can withdraw from this study at any time or refuse to answer any question. Any benefits derived from this study will be used in caring for future surgical patients and there are no risks involved. If you agree to participate, I would like you to sign this consent form (Appendix C). (If the subjects refuse, I will thank them for their time and leave. If they agree, I will proceed on to the next part.)

Before I begin, do you have any questions you would like to ask? (Pause and give them time to consider the question.) Have you ever had any surgery before? (Pause and let them answer.)

(The way the visit proceeds from here will depend on whether this is the subjects' first surgical experience. In the body of this text I will go on as if it is the first time. For subjects who have experienced previous surgeries the changes will include asking them to remember what happened, reenforcing what they know and repeating things they may have forgotten.)

Now I would like to go over some general information with you. Please feel free to stop me at any time if you have any questions. Let's begin with what's going to happen before surgery starting with tonight. Your water pitcher will be taken at midnight and you are not to eat or drink anything after that. The reason for this is since you will be receiving an anesthetic, it is necessary that your stomach be empty of food. Somewhere between 7 and 11 this evening, someone will be in to shave the area where the surgical incision will be made. However, if your surgery is scheduled for late tomorrow, you may be shaved in the morning. The area shaved is considerably larger than the actual incision. That is done to remove as much hair as possible since many germs cling to hair follicles. It is another way of removing any potential sources of infection from the operative site. In the morning you can get washed and brush your teeth but be careful not to swallow any water. Any dentures or partial plates must be removed before going to the OR unless they are permanent. This is done to prevent loss or damage to them. Any other prosthetic device such as artificial limbs are also to be removed for the same reason. You must also remove any rings or other jewelry. If you wish to keep your wedding ring, it will be taped or tied to your finger. This is to prevent loss or damage. You'll be given a hospital gown and you are

to put it on with the opening in the back. The gown will continue to cover you while the anesthesiologist slips your arms out and puts a blood pressure cuff on your arm, places electrocardiogram leads on your chest (this will be demonstrated), and starts IV fluids in your arm unless they were started while you were still on the division. The reason for the IV fluids is to replace any fluids that might be lost during the surgery and it is also a way to keep your body tissues hydrated since you will not be eating or drinking after midnight. You may or may not be ordered medication before going to surgery. If you are, it will be given either at a specific time or right before the OR attendant comes to take you to the OR. It may or may not make you sleepy and your mouth may feel like it is full of cotton. That is a normal reaction. (Pause and give subject a chance to ask questions.)

If you have no questions I would like to focus on what will happen when you get to the OR. When you arrive in the OR you may notice that it is cooler than it was back in your room. That's because the ORs' are kept at 68 to 72 degrees due to the added heat that is created once the overhead lights are put on and because the surgical drapes that are placed over you once you are asleep may cause your body temperature to rise a little. If you are cold, please let someone know and extra covers can be obtained for you.

You may have to wait once you get to the OR but don't be alarmed. Patients are usually taken from their room and brought to the OR anywhere from 20 to 30 minutes before their scheduled time of surgery. That is so they will be ready to be taken into their assigned room once it is ready for them. However, if the wait turns out to be unusually long, someone will let you know and tell you how long the

additional wait will be. Lying on the cart outside of the OR room or in the patient holding area and, especially if you have had medication, will make usual things take on a different perspective for instance, noise may be intensified and lights may seem brighter. Don't be alarmed, that is a normal reaction. If you feel like going to sleep, go ahead. Someone will be watching you so you don't have to feel like you are alone. You will know when you are wheeled into the operating room. You will not be put to sleep until after you are moved into the OR and then onto the OR table. Remember the OR may feel cold, the table will be hard, narrow, and flat, there will be much activity going on in the room, and the lights will be bright. A strap will be placed over your knees and your arms will be tucked down at your sides or placed on table extensions, it may be due to the type of surgery or because of the IV fluids you are receiving. This is also a safety measure since you may move when you are going to sleep or upon waking after the surgery and we don't want you to hurt yourself. The anesthesiologist may put a tube down your throat once you are asleep and that makes it possible to give you oxygen, anesthetic gases and assist you in breathing while you are asleep. But you could also receive oxygen and anesthetic gases through a mask placed over your face.

Let's now talk about the Recovery Room and what will take place there. You can awaken either in the OR or in the Recovery Room. You may be receiving oxygen either by a mask or by a tube in your nose. The oxygen will feel like cool mist on your face if it is by mask. Don't be upset, this is part of Recovery Room routine and makes you feel more comfortable. The nurse will also be taking your blood pressure, pulse, and respirations frequently. She will ask you to cough



and to breathe deeply. I will demonstrate that to you in a few minutes. You will still have the IV fluids in your arm and you will usually keep them until you start to take fluids by mouth. The nurse will also check the dressing over your incision for drainage or bleeding. You may have soreness in the operative site. There will be medication ordered by the doctor to relieve any pain you may have. In the Recovery Room the nurses are able to anticipate when you will need medication by the way you act. For example you may get very restless and move from side to side frequently. Once back on the nursing division the same thing applies. But if you feel you need it, ask for it. If it is too close to the time of your last injection, the nurse will tell you. (Pause and let patient ask questions.)

The rest of this discussion I shall focus on what will happen when you return to the nursing division. When you come back to your room your blood pressure, pulse, and respirations will also be taken but less frequently. You will be asked to do the same things by the unit nurses such as coughing, deep breathing, and turning in bed. (Here demonstrate and ask the patient to return the demonstration.) You can place your hand on the incision or you can hold a pillow or small pad, and firmly support yourself when you cough or deep breathe. This relieves tension on your abdominal muscles and eases the discomfort. When going to turn in bed or get up, if you bend your knees before doing either and also support your incision, the tension on your abdominal muscles are decreased. The doctor may also order blow bottles after your surgery if you had a general anesthetic. When you receive a general anesthetic more secretions are produced in your lungs and if they aren't removed they could cause infection to occur. This

is the reason that you should cough frequently and deep breathe. Using the blow bottles will cause your lungs to expand more fully. If you smoke, it would be much healthier for you if you didn't smoke any more today. And you shouldn't smoke after the surgery. You will notice that when you awaken from the anesthetic you will cough much more and the amount of secretions will be increased. This is from smoking.

You will probably be ordered to sit on the side of the bed or in a chair for a few minutes the evening of surgery. Someone will be with you to give you all the help and support you need. It will be uncomfortable at first but will help you to feel better sooner.

Remember I mentioned earlier that the anesthesiologist may put a tube down your throat once you are asleep. You may notice some throat irritation after the surgery but that is probably due to the tube. The irritation should only last a day or so. Various muscles of your body may be sore but that is due to your position on the OR table because of the surgery that was done.

Do you have any questions about anything we discussed? Is there anything else you would like to talk about before I leave? If not, thank you and I will see you after your surgery. Good-bye.

(This is general information to give to all patients. Special equipment such as use of tubes, drains, catheters, suction, or packing will be inserted into the visit after the description of the surgery is obtained from the subjects' charts.)

#### Post-op

(I will check with the nurse in charge to ascertain that the patient can tolerate responding to a questionnaire.)

Good afternoon (subject's name). Do you remember me? I'm Carol Ganser, the OR nurse who visited you the day before your surgery. Do you remember? I have with me today the questionnaire that I told you about. If you feel well enough, I would like to leave it with you overnight to complete at your leisure. It should only take you about 20 minutes to complete. (If the subject refuses or appears uncomfortable, another more convenient time will be arranged or they will be given the opportunity to withdraw.)

Let me go over the directions with you and see if you have any questions on how to complete it. When you are finished, you can put the questionnaire in the envelope and seal it. If you are discharged before I return, please leave the sealed envelope at the nurses' station. I have put my name and school of nursing on the outside of the envelope. Thank you for your time and cooperation.

## APPENDIX B

Visits to Control GroupPre-op

Good afternoon (subject's name). My name is Carol Ganser. I'm a registered nurse and I work in the operating room. I'm interested in studying how OR nurses can be more helpful in preparing patients for surgery. I'm here to ask you to participate in the study. It will involve my visiting you after your surgery and asking you to complete a questionnaire dealing with how well you felt that your needs were met. It should take you about 20 minutes to do it. Your answers will not be identified in any way and your name will not be used in the study. All data collected will be reported in aggregate form. Your willingness to participate or not to participate in the study will not alter any nursing care that you receive and you can withdraw from the study at any time or refuse to answer any questions. Any benefits derived from this study will be used in caring for future surgical patients and there are no risks involved. If you agree to participate I would like you to sign this consent form (Appendix D). (If the subjects refuse, I will thank them for their time and leave. If they agree, I'll proceed.) Thank you for agreeing to participate in this study. I will be visiting you after your surgery and at that time I will have the questionnaire for you to answer. I'll see you then. Good-bye.

Post-op

(I will check with the nurse in charge to ascertain that the patient can tolerate responding to a questionnaire.)

Good afternoon (subject's name). Do you remember me? I'm Carol



Ganser, the OR nurse who visited you the day before your surgery. Do you remember? I have with me today the questionnaire that I told you about. If you feel well enough, I would like to leave it with you overnight to complete at your leisure. It should only take you about 20 minutes to complete. (If the subject refuses or appears uncomfortable, another more convenient time will be arranged or they will be given the opportunity to withdraw.)

Let me go over the directions with you and see if you have any questions on how to complete it. When you are finished, you can put the questionnaire in the envelope and seal it. If you are discharged before I return, please leave the sealed envelope at the nurses' station. I have put my name and school of nursing on the outside of the envelope. Thank you for your time and cooperation.

UNIVERSITY HOSPITALS OF CLEVELAND  
PATIENT CONSENT FOR INVESTIGATIONAL STUDIES

45 APPENDIX C - CONSENT FORM FOR THE EXPERIMENTAL GROUP

TITLE OF PROJECT: EVALUATION OF OR NURSE INTERVENTION  
IN TERMS OF PATIENT SATISFACTION

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DESCRIPTION OF STUDIES:

You are being asked to participate in a study being conducted by a graduate nursing student with the purpose of evaluating nursing intervention by the OR nurse in terms of patient satisfaction. The study has been approved by the School of Nursing Research Review Committee and the Hospital Committee on Clinical Research.

If you are willing to participate in the study you will be visited by the researcher the afternoon before surgery. At that time she will answer any questions that you may have regarding your surgery except questions pertaining to anesthesia or the technical aspects of the surgery. She will also give you preoperative instructions related to your postoperative recovery period.

After your surgery you will be visited by the researcher and asked to complete a questionnaire dealing with various aspects of nursing care related to your surgical experience. You are free to leave unanswered any questions.

Carol A. Ganser has described to me what is going to be done, how it is going to be done, the risks, hazards and benefits involved, and will be available for questions at 461-1563. I understand that my decision to participate or not to participate in this study will not alter my usual health care. In the use of information generated from these studies, my identity will remain anonymous. I am aware that I may withdraw from this study at any time. The undersigned volunteers to participate in this project to be conducted at least in part at the University Hospitals of Cleveland.

Signature \_\_\_\_\_ Age \_\_\_\_\_ Date \_\_\_\_\_

Parent or Guardian Signature \_\_\_\_\_  
(If subject is a minor)

Witnessed by \_\_\_\_\_ Date \_\_\_\_\_  
FC7087 (Signature of Project Investigator)

UNIVERSITY HOSPITALS OF CLEVELAND  
PATIENT CONSENT FOR INVESTIGATIONAL STUDIES

45 APPENDIX D - CONSENT FORM FOR THE CONTROL GROUP

TITLE OF PROJECT: EVALUATION OF OR NURSE INTERVENTION  
IN TERMS OF PATIENT SATISFACTION

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DESCRIPTION OF STUDIES:

You are being asked to participate in a study being conducted by a graduate nursing student with the purpose of evaluating nursing intervention by the OR nurse in terms of patient satisfaction. This study has been approved by the School of Nursing Research Review Committee and the Hospital Committee on Clinical Research.

If you are willing to participate in the study, you will be visited by the researcher after your surgery. At that time you will be asked to complete a questionnaire dealing with various aspects of nursing care related to your surgical experience. You are free to leave unanswered by questions.

Carol A. Ganser has described to me what is going to be done, how it is going to be done, the risks, hazards and benefits involved, and will be available for questions at 461-1563. I understand that my decision to participate or not to participate in this study will not alter my usual health care. In the use of information generated from these studies, my identity will remain anonymous. I am aware that I may withdraw from this study at any time. The undersigned volunteers to participate in this project to be conducted at least in part at the University Hospitals of Cleveland.

Signature \_\_\_\_\_ Age \_\_\_\_\_ Date \_\_\_\_\_

Parent or Guardian Signature \_\_\_\_\_  
(If subject is a minor)

Witnessed by \_\_\_\_\_ Date \_\_\_\_\_  
FC7087 (Signature of Project Investigator)

## APPENDIX E

## DEMOGRAPHIC DATA SHEET

CODE # \_\_\_\_\_

AGE \_\_\_\_\_ SEX \_\_\_\_\_ MARITAL STATUS S M SEP. D W

RELIGION \_\_\_\_\_ OCCUPATION \_\_\_\_\_

ADMITTING DIAGNOSIS \_\_\_\_\_

DATE OF ADMISSION \_\_\_\_\_

SURGICAL PROCEDURE \_\_\_\_\_

DATE OF SURGERY \_\_\_\_\_

DATE OF INITIAL VISIT \_\_\_\_\_

DATE OF POSTOPERATIVE VISIT \_\_\_\_\_

INITIAL SURGERY YES \_\_\_\_\_ NO \_\_\_\_\_

PREVIOUS SURGERIES - LIST BELOW



## APPENDIX F

Guidelines for Preoperative Visit to Experimental Group

1. Before visiting the patient the researcher will review the patient's chart and consult with the nurse in charge.
2. Explain to the patient:
  - a. preoperative preparation in general
  - b. use of preoperative medication and effects
  - c. physical components of the OR
  - d. Recovery Room activities such as use of oxygen and frequent taking of vital signs
  - e. possibility of postoperative discomfort such as incisional pain, muscle discomfort or sore throat.
  - f. use of special equipment when appropriate
3. Instruct the patient in the post surgical techniques of coughing, deep breathing and turning.
  - a. explain importance of procedures
  - b. include return demonstration
4. Give the patient the opportunity to ask questions. (All questions will be recorded.)
  - a. questions pertaining to the surgical procedure or anesthesia which require an answer based on expertise not a part of the researcher's repertorie will be referred to the proper person.
  - b. questions falling within the know-how of the researcher will be answered by the researcher.
  - c. provide patients the opportunity to express feelings
5. Report and record significant nursing observations related to patient welfare.

6. Record preoperative visit on patient's chart. (It is expected that interactions of this nature are recorded according to normal hospital procedures.)

## APPENDIX G

Postoperative Evaluation Questionnaire

PART I How well do you feel that the following information given to you before surgery helped you to deal with the surgery itself?

Please indicate by checking one of the answers after each question.

1. Information related to not eating or drinking after midnight.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

2. Importance of removing your dentures, partial plates or other prosthetic devices such as artificial limbs.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

3. Various effects that preoperative medication may have had on you.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

4. Opportunity to receive information related to the physical setup of the OR such as temperature, noise, and bright lights.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

5. Knowledge that you may have to wait for a time in the surgical suite before being taken into the operating room.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

6. Knowledge that someone would be available in case you needed anything while waiting.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

7. Information related to the safety measures in the OR such as having a strap placed across your knees or securing your arms.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

8. Information related to daily routine of the Recovery Room such as taking your blood pressure and pulse.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

9. Information that describes how the oxygen would feel on your face if it was given to you by mask in the Recovery Room.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

10. Information related to pain and discomfort after the surgery.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

11. Information on how to cough and deep breathe after your surgery.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

12. Information related to supporting your incision to minimize postoperative discomfort.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

13. Information concerning various drains or tubes in your incision that might cause drainage on the bandage.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

14. Information that you might have a tube in your bladder to drain your urine for awhile post-surgery.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

15. Knowledge that you may have a tube in your stomach connected to a suction machine.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

16. Information that you would be getting up the evening of surgery.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

17. Importance of using blow bottles after surgery.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

18. Importance of receiving IV fluids until you begin to take sufficient fluids by mouth.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed



19. Information related to possibility of some throat irritation post surgery.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

20. Information related to possibility of muscle soreness after surgery.

☐ most helpful ☐ helpful ☐ not very helpful ☐ not discussed

PART II Briefly answer the following questions.

1. What concerned you most about your surgery?

2. Were you given enough time to ask questions? ☐ yes ☐ no

If you answer no, please explain.

3. Were you given adequate time to express your feelings about the surgery? ☐ yes ☐ no

If you answer no, please explain.

4. Did you have any questions that were not answered? ☐ yes ☐ no

If you answer yes, please explain.

## Reference Notes

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## Abstract

→ The purpose of the study was to evaluate in terms of patient satisfaction the effect of intervention by the operating room nurse. The study was conducted over a two month period at a large midwestern hospital. The sample consisted of 54 male and female subjects over 18 years of age admitted for elective general surgery. For participation in the study the subjects also had to meet the following criteria: (1) understand verbal instruction; and (2) read and communicate in English.

The day preceding surgery subjects were randomly assigned to the experimental and control groups. Subjects in the experimental group received preoperative teaching by the researcher in addition to routine care. Subjects in the control group received only routine hospital care. Subjects in both groups were visited within two to three days post surgery and asked to complete the postoperative evaluation questionnaire. Completed questionnaires were retrieved by the researcher personally from the subjects or from a designated place at the nurse's station.

→ Analysis was done through use of t tests for differences of mean scores derived from the postoperative evaluation questionnaire. The hypothesis, patients who receive a postoperative visit by the OR nurse in addition to the routine care given on the nursing unit will score higher on a postoperative evaluation questionnaire than those patients who receive only routine care from the unit nursing staff was supported. The significant results of the statistical tests indicate that intervention by the OR nurse can and does satisfy needs that surgical patients have prior to surgery at this particular period in their life. ↙

Recommendations for further study including replication of the study in its original form are suggested along with suggestions for additions and changes if the study was expanded. Questions that the OR nurse must consider today are presented. These include questions pertaining to the increasing use of day care ambulatory surgical center and the expanding role of the operating room nurse is addressed.